

DOTS

AND PUBLIC-PRIVATE PARTNERSHIPS

DISCUSSION GUIDE with LEARNING ACTIVITIES



World Health Organization
Stop TB Initiative

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CONTENTS

Glossary 2

PART 1 Introduction 3

About the video and this guide 3

How to use the guide and learning activities 4

Aims 6

PART 2 Discussion guide and learning activities 7

TB – the global crisis 7

Recognising symptoms and treating TB 8

DOTS - Direct Observation Treatment, Short course 12

Learning activity: Challenges of completing treatment 16

Public-private partnership 18

Learning activity: Building partnerships 21

Access to treatment 23

Stigma and discrimination 26

Learning activity: Understanding issues surrounding TB 28

Learning activity: Understanding stigma and beliefs about TB 31

Counselling and education 33

Learning activity: Counselling for people with TB (or suspected TB) 34

PART 3 Resources 36

Printed materials 36

Electronic materials 37

Audio-visual materials 37

PART 4 Annexes 38

Annex 1 – Session plan 38

Annex 2 – Participant questionnaire 39

Annex 3 – Sample treatment regimen for TB 40

Annex 4 – Guidelines to reduce transmission of TB in health facilities 41

Annex 5 – DOTS: a short course in TB control 42

GLOSSARY

Bacilli – micro-organisms that are shaped like rods.

BCG – Bacille Calmette-Guerin vaccine. This vaccine does not reduce the risk of getting infectious tuberculosis (TB), so it has a limited role in TB control. However, it can protect young children against the more severe and life-threatening forms of TB disease in childhood, such as tuberculous meningitis and disseminated disease.

Discrimination – to treat someone differently (especially unfairly) on the basis of e.g. religion, colour, health status.

Disseminated disease – in disseminated disease, TB affects many parts of the body at the same time. Signs of disseminated disease include steady high fever, rapid pulse, nausea, vomiting and diarrhoea, cyanosis (blueness of the lips) and, occasionally, respiratory distress.

DOTS – Directly Observed Treatment, Short course, is a strategy for curing people with TB that aims to ensure high levels of adherence to and completion of TB treatment. An important part of the strategy is that a trained DOTS supervisor is responsible for observing the person with TB taking each dose of drugs.

Extra-pulmonary tuberculosis – TB that affects parts of the body other than the lungs.

Immune system – the tissues of the body that protect the body from the invasion of certain diseases. A healthy immune system produces antibodies to fight off disease and infection.

Lumbar puncture – procedure for removing fluid from the spine in order to diagnose disease.

Prophylaxis – treatment or action taken to protect someone who has been exposed to an infectious disease.

Pulmonary tuberculosis – tuberculosis affecting the lungs.

Smear negative – when examined under a microscope, no TB bacilli are visible in the sputum sample.

Smear positive – when examined under a microscope, TB bacilli are visible in the sputum sample.

Sputum – substance coughed up from the lungs.

Sputum smear microscopy – use of a microscope to examine sputum from a person with suspected TB. The test requires trained laboratory workers and well-maintained equipment.

Stigma – a negative label put on a person or group of people.

Tuberculin test – tuberculin skin testing measures the body's response to TB. It can be a useful indicator of infection and probable disease in young children.

PART 1 Introduction

We hope that you will find this guide a useful accompaniment to the video *DOTS and public-private partnerships*.

We welcome your feedback on the guide, including comments on further information you would like and which learning activities you found particularly useful. Please send correspondence to: Stop TB Initiative, Department of Communicable Diseases and Surveillance, World Health Organization, 20 Avenue Appia, CH-1211 Geneva 27, Switzerland. Fax: +41 22 791 4199. E-mail: stoptb@who.int

About the video and this guide

The video and guide provide information about the global TB (tuberculosis) crisis and the importance of including private practitioners in programmes providing treatment and care for people with TB.

The video gives a general introduction to the TB crisis and raises some of the key challenges of the epidemic. These include:

- the increasing number of people with TB
- the need to make TB treatment and care accessible to everyone
- the need to make TB treatment free
- the stigma and discrimination surrounding TB
- the need to educate people with TB to encourage them to complete treatment
- monitoring and evaluation of treatment.

To counteract these challenges, the video can be used as a mobilizer to encourage health services to create partnerships with private practitioners, if strong public DOTS programmes are in place. The video reinforces the message that there is a cure for TB and that treatment following the Direct Observation Treatment, Short course (DOTS) strategy offers the possibility of high cure rates. The video suggests:

- partnership between private practitioners and national TB programmes as an effective way of making TB treatment available to everyone who has TB
- educating people with TB about the disease and its treatment to increase the number of people who complete treatment
- ensuring that TB treatment is delivered in a way that minimises the need for people with TB to travel, spend time away from their families or to take time off work in order to receive treatment
- ensuring TB treatment is free.

Target audience

The video and guide are intended for use as a discussion starter for raising awareness about TB, the DOTS treatment strategy and the inclusion of private practitioners in TB treatment programmes. It is designed for use with those who would be involved in public-private

partnerships – private practitioners, non-governmental organisations, those involved in national TB programmes and local government.

How to use the guide and learning activities

This section is designed to help you facilitate the training sessions.

Planning the training session

It is best to train people in small groups of five to ten people per training session. You may want to share some material with people before the session so that they come prepared.

Watch the video and read through the notes before showing the video to participants so that you can adapt the questions—and background information—to your audience.

It may be a good idea to collect data on the number of people with TB in the local community, so you can relate the figures given in the introductory section (TB – the global crisis) to the situation in local communities.

Decide on a plan for each training session (for an example, see Annex 1):

- Decide which section of the guide you will focus on. Each section may take up to three hours to complete, including time for the related learning activity.
- Plan to cover one section in each half day training session.
- Remember to allow plenty of time for questions during, and feedback at the end of, each session.
- Once you have decided on a timetable, develop a plan for the session, which you can share with participants.

Getting started

Share your plan of the session with participants; you may put it on a flip chart or distribute it before the session. Tell them briefly what you hope to cover in the session.

Ask your audience what expectations, if any, they have of the session. You can return to these expectations at the end of the session to see if they were met.

If you do not know much about your audience before the session, you may want to ask them to fill in a short questionnaire before they watch the video (see Annex 2). Or, you can ask the group to tell each other a little bit about themselves and what they know about TB.

Discussion guide

The discussion guide is divided into sections that focus on key messages within the video. Each section includes learning objectives, discussion questions, quotes and background information. Some sections also include a learning activity that can be included in the training session.

Learning objectives These learning objectives provide a summary of the aims of each section. At the end of the session, ask the participants whether they feel that they have achieved these objectives.

Discussion questions These appear at the beginning of each section and are designed to help the audience to relate the messages in the video to situations or experiences in their work and communities. Some of the questions are specifically designed for health workers. You can adapt these questions for your particular audience once you know what they know about TB and what their needs are.

Quotes These are included to help you link the sections in the guide to relevant points raised in the video.

Background information This section is designed to provide basic information on the key messages raised in the video. Read through this information before the session. Depending on your audience's level of knowledge and needs, you may want to photocopy some of the information to hand out during or after the session. You may also want to adapt the information or include other information from the resources listed in Part 3 of the guide.

Learning activities These learning activities are designed to be used, with the video and discussion guide, as part of training for health and community workers working with people with TB. You are encouraged to adapt the exercises presented in this guide to suit your audience and setting. Have the materials you need for each learning activity ready. During the learning activities, it is a good idea to record the key points of discussion on a chalkboard or paper.

Remember to:

- use words that participants will understand
- think about your own attitudes to others
- listen to other people's views without judging them
- encourage all members of the group to participate
- allow people to ask questions.

Aims

Each section of the guide has a specific aim. When you have finished each section, ask yourself and your audience whether the aim has been achieved.

Recognising and treating TB This section aims to be a basic summary of TB and how to treat it.

DOTS – Directly Observed Treatment, Short course This section reminds health workers of the importance of using the DOTS strategy to treat people with TB, especially in the light of an increase in the incidence of multi-drug resistant TB. It also explains the factors crucial to the success of DOTS:

- political commitment
- case detection by sputum smear microscopy among people with symptoms of TB presenting at health services
- direct observation and support of people taking drug treatment
- uninterrupted supply of free drugs
- monitoring and evaluation.

Public-private partnerships This section aims to increase awareness of the importance of partnership between public health services and private practitioners in providing diagnosis and treatment for people with TB. It also emphasises that such partnerships should not be attempted until public services are strong enough to support them.

Access to treatment This section aims to help individuals to understand the reasons that limit people's access to treatment for TB and to consider ways in which they can improve access for everyone in their community.

Stigma and discrimination This section aims to help individuals to understand how stigma and discrimination affect people individually and also affect the delivery of health services. It also encourages people to think of ways to challenge this discrimination in the services they provide. There are two learning activities relevant to this section.

Counselling and education This section aims to help individuals understand the important role that counselling and education play in encouraging people to seek treatment for TB and in ensuring that people complete their course of treatment. There is a learning activity for this section.

PART 2 Discussion guide and learning activities

TB - the global crisis

DISCUSSION QUESTIONS

How can you find out how many people in the local community are being treated for TB? How can you find out whether the number of people with TB is increasing? Where do these people go for diagnosis and treatment? What treatment can you offer people with TB? What prevention and care programmes do you have for TB?

BACKGROUND INFORMATION

It is estimated that:

- a third of the world's population is infected with TB
- 16 million people have active TB
- eight million people develop active TB every year.

Active TB can be cured. Even if someone has TB and HIV (Human Immunodeficiency Virus) their TB can be cured. Multi-drug resistant TB (see page 10) can be cured though treatment is much more expensive and may take longer.

It is vital that everyone with TB has access to diagnosis and treatment for the disease, if the spread of TB is to be reduced. In some areas, where many people use private health practitioners rather than public health services, this may mean expanding existing, successful, DOTS programmes to include private practitioners.

However, this should not be done unless existing DOTS programmes are strong. If partnerships are set up before public services are strong enough, the partnership may fail and this will also put future partnerships at risk. Private practitioners must have confidence in the public services, if partnerships are to be successful.

Recognising symptoms and treating TB

LEARNING OBJECTIVES

- To recognise the signs and symptoms of TB in adults and children.
- To know that the main way to confirm diagnosis is using sputum smear microscopy.
- To review TB treatment – how to provide effective and appropriate drug therapy for people with TB.
- To understand the causes of multi-drug resistant TB.

DISCUSSION QUESTIONS

What are the symptoms of TB? What are the symptoms of TB in children? What methods do you use for diagnosing TB? Where do people in your community go to be tested for TB? Are there some people who you suspect have TB, but who do not go for testing? Why do you think they do not go for testing? What are the most commonly prescribed drugs for TB? How do you treat pregnant women with TB? How do you treat babies with TB? How do you treat children with TB? How long should treatment continue? How do you know if people have been cured of TB? What is multi-drug resistant TB (MDR-TB)? Why does MDR-TB develop? How do you treat MDR-TB?

BACKGROUND INFORMATION

TB is caused by infection with the bacillus *Mycobacterium tuberculosis*. Active pulmonary TB is the only form of the disease that is infectious, spreading from person to person via the air. People who have close contact with a person who has infectious TB, such as family, friends and health workers, are at greatest risk. TB spreads most easily in over-crowded, badly-ventilated places and therefore is often, but not always, a disease of poverty.

Once infected with TB, a person remains infected for the rest of his or her life. But most people do not develop active TB and so are not infectious to others. A healthy immune system can stop the germs from multiplying enough to cause the illness. However, TB germs may multiply and destroy the lung tissues, leading to active TB.

Signs and symptoms of active TB

In adults Health workers should suspect pulmonary TB in adults who have one or more of the following symptoms:

- cough for more than three weeks
- blood in the sputum
- chest pain for more than a month
- increasing weakness and loss of weight
- past history of TB or treatment of cough.

TB treatment in adults should not start on the basis of clinical evidence alone. The diagnosis should be confirmed by sputum smear microscopy, which identifies infectious cases of pulmonary TB.

TB also affects other parts of the body (non-pulmonary TB), such as disseminated disease, tuberculous meningitis or TB of the skin or mucous membranes, or bones and joints or skin.

In children TB in children is more difficult to recognise because clinical signs and symptoms in children are non-specific (see box). General symptoms to look for include:

- decrease in weight without any obvious explanation or loss of appetite and failure to thrive and gain weight
- two or more episodes of fever without any obvious cause, such as malaria or acute respiratory infection
- swollen, painless swellings affecting the lymph nodes, especially in children with HIV
- cough for more than two weeks.

Health workers should suspect TB in children under five who:

- are in close contact with someone who has had a positive sputum smear
- have clinical signs and symptoms (see above).

Diagnosis should be confirmed on the basis of further tests, usually x-ray. Sputum smear microscopy is less helpful in children. However, in many places further tests are not possible, so health workers may have to decide if a child has TB based on history and physical examination. It is reasonable to assume that a child with clinical symptoms, a positive tuberculin skin test and who is in contact with an infectious source has TB.

There are two important principles of TB treatment. The first is that people must receive a course of an effective combination of drugs. The second is that they need to continue to take these drugs for the whole length of treatment. Most people need support and encouragement to complete their course of treatment. Studies have shown that direct observation of treatment increases the number of people who complete their treatment.

On the basis of this research, the DOTS (Directly Observed Treatment, Short course) approach was developed (see next section). Short course treatment consists of an intensive phase of treatment for two months followed by a continuation phase of four to six months; six to eight months treatment in total (see below). Treatment using the DOTS strategy can:

- cure active TB
- help to prevent the spread of TB to other family and community members
- help people with TB to continue treatment for the full course
- reduce the chance of drug resistance developing.

Drug protocol

The most commonly used TB drugs are: isoniazid, rifampicin, ethambutol, pyrazinamide, streptomycin, and thiacetazone. Thiacetazone is not recommended in areas where HIV infection is common because of side-effects in people with HIV. Some of these drugs are available in combination preparations, for example isoniazid and rifampicin. Courses of treatment that contain both isoniazid and rifampicin are the most effective.

Long-course treatment lasts 12-18 months. However, people often find it difficult to complete such long treatment. Short course treatment usually lasts for six to eight months.

Treatment of people with smear positive TB should always include:

- an initial **intensive phase** where a combination of four drugs is given daily. This is to eliminate as many TB bacilli as possible and prevent the development of drug resistance. The initial phase of therapy should be given for a minimum of two months and continues until the person becomes smear negative. Most people will be smear negative after two months of treatment.
- a **continuation phase**. In this phase fewer drugs are given, but the treatment needs to be continued for long enough to ensure that the person is permanently cured and does not relapse after completion of treatment. Depending on the drugs used, this phase can take four to six months.

Intermittent therapy means taking TB treatment three times a week instead of daily. There is no difference between intermittent and daily regimens in terms of the length of time before people are no longer infectious, or are cured.

To be sure that TB is cured, a person who is initially smear positive must produce a smear negative result after treatment. The person's sputum should be examined after the initial two months of treatment. If it is smear negative, they can start the continuation phase. The sputum should be examined again at the end of the fourth or fifth month to identify people who have failed treatment. During the last month of treatment, a final smear is taken to identify cure or treatment failure. Sputum conversion (from smear positive to smear negative) is the only way to be sure that a person is cured, even if they have completed treatment and have no clinical symptoms. If it is impossible to examine the sputum, then the person is classified as 'treatment completed', rather than cured.

The best way to assess success of treatment in children is improvement in general wellbeing and weight gain. The emphasis in children should be on completion of treatment – cure is almost always achieved if a child completes the full treatment.

Multi-drug resistant TB

An effective DOTS programme prevents the development of MDR-TB. MDR-TB is caused by strains of TB bacteria that are resistant to the two most effective TB drugs, isoniazid and rifampicin. MDR-TB occurs when:

- the wrong drug treatments are prescribed
- drugs are not taken consistently – because people with TB stop taking treatment or there is an irregular supply of drugs

- drugs are not taken for the entire period of treatment (six to eight months).

MDR-TB requires at least 18-24 months of treatment with drugs that are at least 100 times more expensive than regular TB drugs, cause more severe side-effects and often fail to cure the MDR-TB. The expensive drugs needed to cure MDR-TB are not available in many developing countries.

There are two types of drug resistance – **acquired** and **primary**.

Acquired resistance develops as a result of inadequate treatment. Use of a single drug is the most important cause of acquired resistance. This is because some TB bacilli are naturally resistant to TB drugs. If a single drug is used to treat a person who is infected with a large number of TB bacilli, only those that are sensitive to that drug are killed, allowing the resistant bacilli to multiply. This is the reason for using several drugs during the initial intensive phase of treatment, until the number of bacilli has been greatly reduced.

Primary resistance occurs when an individual is infected by someone who has MDR-TB. This means that the newly infected person will have MDR-TB. The number of people with primary resistance – who have MDR-TB, but have not been treated for TB before – is increasing.

Drug resistance is most likely to develop in countries with poor TB control programmes. That is, in programmes in which many people cannot complete treatment because of inadequate drug supply or in which many people stop taking their treatment. Another cause of drug resistance is uncontrolled prescribing where either incorrect drugs are prescribed or drugs are prescribed for an inadequate length of time. Where there are good national programmes, MDR-TB represents no more than two per cent of all cases of pulmonary TB.

DOTS - Directly Observed Treatment, Short course

LEARNING OBJECTIVES

- To understand the factors crucial to the success of DOTS.
- To understand the role of DOTS supervisors in observing and supporting people who are being treated for TB.
- To understand the importance of monitoring and evaluation.

DISCUSSION QUESTIONS

Do you know about DOTS? If so, how would you explain DOTS to your colleagues? Is there a DOTS programme in your community? What are some of the strengths and weaknesses of the programme in your community? How could you make it more effective? If people are not cured after treatment, do you know why? For instance, do many people in your community stop taking their drugs before they have completed treatment? Are your monitoring procedures and records up-to-date? How do you follow-up people who stop treatment before it is complete? What do you think are some of the main factors affecting the success of DOTS? What monitoring and supervision procedures do you have for people being treated for TB?

BACKGROUND INFORMATION

- DOTS can cure active TB
- DOTS helps to prevent the spread of TB
- DOTS extends length and quality of life whether people are HIV positive or not.

One of the main problems with TB treatment is that not everyone completes a full course of treatment. Although these people may not die, they do not get better either, and continue to spread TB in the community. Incomplete treatment leads to drug resistance.

Under the DOTS strategy, a DOTS supervisor observes a person with TB taking each dose of their treatment. DOTS supervision can be provided by:

- a health worker in a health facility
- a health worker in the community
- a community member, who has received training as a DOTS provider.

DOTS supervision can take place in a health facility or in the community. Making TB treatment community-based makes it easier for people to continue working or caring for families while taking treatment.

A DOTS supervisor also provides encouragement and support to the person, so it is more likely that they will complete treatment. DOTS supervisors can also follow-up people who

have stopped coming for treatment and hopefully encourage them to return. By identifying the reasons for treatment failure, TB programmes can also develop more effective ways for delivering treatment that mean more people start and complete treatment.

The DOTS strategy provides a way of helping people take their treatment properly and provides the means for health workers to know the person is becoming non-infectious and will, in the end, be cured. To be successful, DOTS needs:

- political commitment
- case detection by sputum smear microscopy among people with symptoms of TB presenting at health services
- direct observation and support of people taking drug treatment
- uninterrupted supply of free drugs
- monitoring and evaluation.

Political commitment

Commitment to DOTS is necessary at all levels, to ensure that necessary resources, such as staff, drugs and laboratory supplies, are allocated.

The decision to introduce DOTS should be made jointly by the national programme and the district health or medical officer. DOTS should be phased in giving priority to districts that are accessible, have a high number of cases of TB, are already using standard short course treatment and where there is a good chance of success.

DOTS involves health services, NGOs, private practitioners and the local community. DOTS committees can be set up to help the local community understand more about DOTS. The DOTS committee should be a group of motivated people (e.g. social workers, people with TB, health service managers), whose role is to plan and monitor DOTS in the district.

DOTS committees can:

- increase public awareness about TB in the community through advocacy and education
- support people in the community with TB by providing DOTS supervisors and people to follow-up those who stop treatment
- identify local problems in DOTS implementation and propose solutions at community level
- encourage co-operation between health institutions, health workers and NGOs
- protect health workers at treatment centres from undue political pressures.

Case detection

Screening people who come to health facilities who have had a cough for more than three weeks is seen by many health professionals as the best way to identify people who have pulmonary TB. Diagnosis of infectious TB is based on sputum smear microscopy. It is the most effective and efficient way to identify infectious (active pulmonary) TB.

Sputum smear microscopy involves testing three samples of sputum from the person with suspected TB. The samples should be collected within 24 hours of each other: one when the

person visits the health facility, one early next morning, and the next when the person with suspected TB returns to the health centre. Each sample is examined under the microscope. If TB germs can be seen in the sputum, the person is sputum smear positive. This means that he or she has a large number of TB germs in the lungs and therefore can easily spread TB. Two positive sputum samples are enough to confirm the diagnosis of TB. If the first two smears are positive, there is no need to examine the third smear. If the first smear is positive and the second is negative, examine the third smear. One negative smear is not enough to exclude a diagnosis of TB.

Sputum smear microscopy is cheaper, easier and more reliable than other methods. However, it still requires well-trained laboratory workers and well-maintained laboratory equipment (microscope, clean glass slides, sputum containers, fresh reagents and a supply of clean water). Poorly trained staff or inadequate equipment can lead to over-diagnosis of smear negative and under-diagnosis of smear positive cases.

Direct observation

Standardised regimens of DOTS consist of a combination of drugs taken over a six to eight month period. In the first two months (the initial phase), four drugs are taken together, while for subsequent months (the continuation phase) just two drugs are taken. If the treatment is carefully followed, a person with infectious pulmonary TB will stop being infectious within two to six weeks, which means wherever an effective TB programme is established, the number of cases of TB – and thus rates of transmission of infection – in the local population quickly falls.

Many people need support and encouragement to complete their treatment. Eight months of treatment is a long time and people may find it especially difficult to continue treatment when they are feeling well and have returned to work. Providing information and education for people with TB is crucial to the successful completion of treatment (see page 32), as is the support of the person observing treatment. People with TB should be encouraged to choose someone to observe them taking each dose of drugs.

The DOTS supervisor should, ideally, be someone who:

- lives near to the person with TB, so it is easy to meet them every day
- is available nearly every day in the month
- will encourage the person with TB to finish treatment
- will watch the person with TB take the correct number of tablets each day

A DOTS supervisor is usually a community health worker, but could be a community member, private practitioner or traditional health practitioner – as long as they are trained in DOTS. At the Mahavir Hospital in Hyderabad, India, paramedics work as DOTS providers.

'Everyday we see new patients. I go to their houses from Mahavir Hospital. I see where they live. . . . When I go to a particular area if another patient is taking treatment I introduce myself, see how their treatment is going and wish them good luck. I then return to Mahavir Hospital.' **Hasif, Paramedic/DOTS provider, Mahavir Hospital**

Uninterrupted supply of drugs

People often stop taking medicines because they cannot pay for them. To prevent this, TB drugs must be free. If people have to pay they may stop treatment as soon as they start to feel better. In addition, treatment centres must always have sufficient stocks of TB drugs, so they do not run out if supplies are delayed.

As a guide to ensuring sufficient stocks of TB drugs, first estimate the number of people who will be diagnosed with TB at the treatment centre over the next four months. Then calculate the quantity of drugs needed to provide all these people with a full course of treatment, double the amount and subtract the existing stock. This gives the quantity of drugs needed for four months and an adequate back-up stock in case of delays or interruptions in supply.

If TB drugs are out-of-stock, people should not be started on treatment using only some of the drugs in a recommended regimen, as this may lead to drug resistance. It is important to obtain all the drugs required, before starting treatment.

Monitoring and evaluation

The two most important aspects of monitoring are reports on case finding and outcome of treatment and evaluation. The outcome of treatment is assessed using an internationally-recommended reporting and recording system, based on the people registered for treatment during a three-month period. For people treated with an eight-month regimen, their progress on treatment is monitored by doing sputum examinations at two months, five months and at the end of treatment. The results are recorded in the TB register, which is kept at each treatment centre. This information is used to calculate what proportion of people complete a full course of treatment and are cured and the proportion that default, die or are classified as treatment failures.

Each individual also has a treatment card, on which the DOTS supervisor records each dose of drugs taken. This record-keeping ensures that people who stop treatment are quickly identified and followed-up. DOTS supervisors play an important role in discovering reasons for stopping treatment and working with the person with TB to overcome them.

People who interrupt treatment should be encouraged to re-start treatment, but the management of these people depends on a number of issues:

- type of person, e.g. first TB treatment, MDR-TB, repeat treatment
- amount of time the person took treatment
- length of interruption of treatment
- whether they are sputum smear negative or positive when returning to treatment.

People who interrupt treatment should be referred to a trained TB nurse or doctor, who can assess them and prescribe appropriate treatment.

Regular monitoring and evaluation are essential to ensure that policies are being followed, to provide on-the-job training and to help health workers to solve problems at a local level. Identifying and solving problems at a local level can help health workers to identify gaps in services and encourage them to try to adapt DOTS to suit the needs of people with TB.



LEARNING ACTIVITY Challenges of completing treatment

AIM to help health workers to explore why people might stop taking their drugs.

MATERIALS copies of the game, with stepping stones left blank. Chalk. Coins or stones.

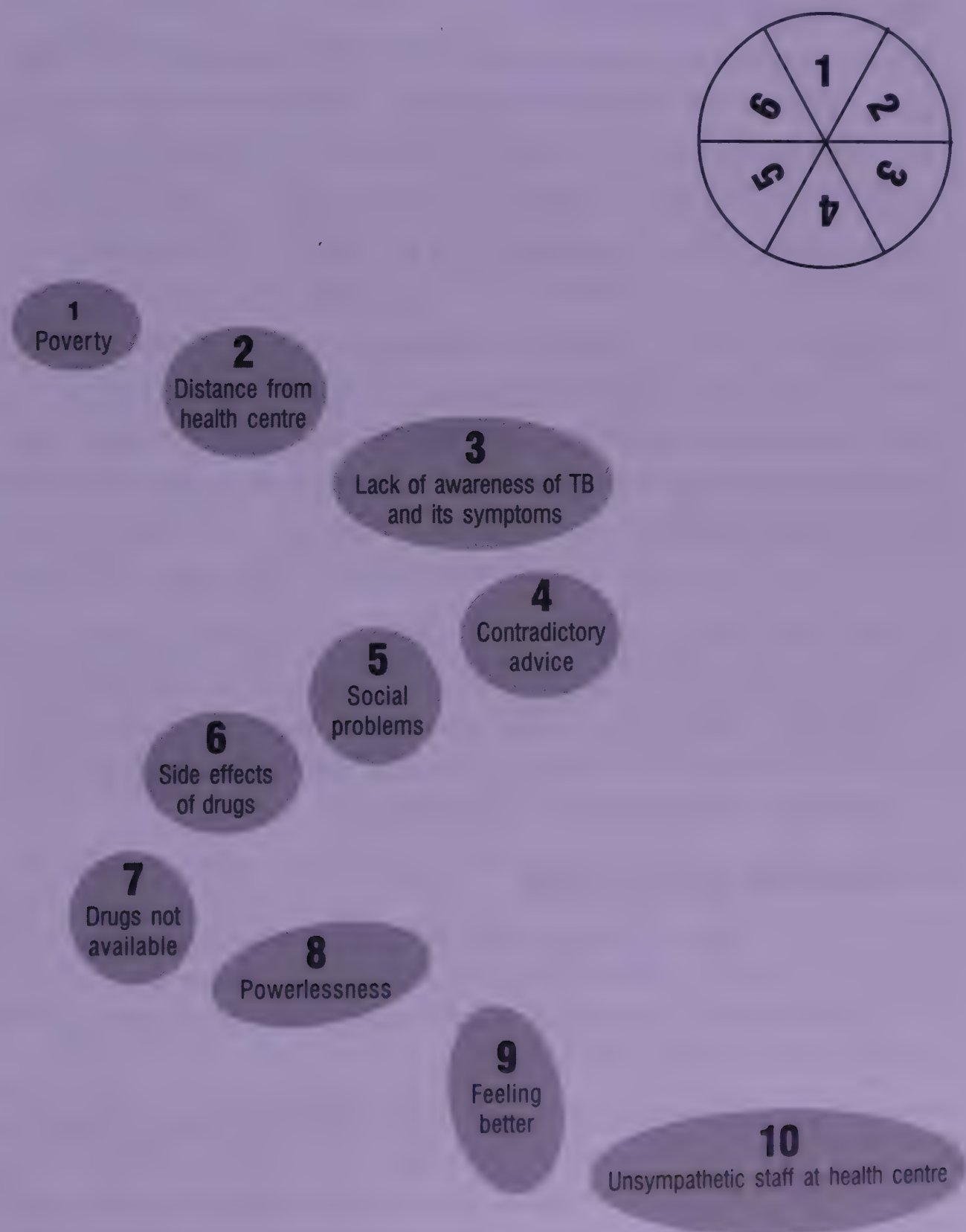
TIME about one hour.

This game can be played by individuals or small groups, playing against each other. Players have to cross the TB treatment river, using the stepping stones. If they reach the other side they have completed their treatment and are cured. However, there are many reasons why they might fall off the stones and fail to take their drugs.

- 1 Ask participants to describe their typical reaction to someone who stops treatment – often anger and frustration. Then ask them to think of all the reasons why people with TB might not complete treatment and pick out the most important ones.
- 2 Draw ten 'stepping stones' on the floor and write the ten most important reasons in them (one in each circle).
- 3 Draw a circle about 50cm in diameter on the floor and divide into six wedges. Write the numbers 1 to 6 in the wedges. Draw a boundary line two to three metres away from the centre of the circle.
- 4 The player stands behind the boundary line and throws a coin or stone into the circle. If the coin lands **inside a wedge**, the player moves across that number of stepping stones. If the coin lands **outside the circle**, or **on a line**, then the player has fallen off the stone, and is **out**. If the player's first throw is out, allow them to throw again until they land on a wedge and reach a stone. Each person continues throwing until they reach the other side or fall off a stone.
- 5 Discuss the game with participants:
 - How many people fell off? Is this figure similar to the proportion who do not complete their treatment?
 - From which stones did most players fall? Are these similar to the reasons why people default from treatment? What are the most common reasons?

- For which of the reasons given is the person being treated responsible?
- For which of the reasons given are health workers responsible?
Usually only one or two reasons are the person's responsibility, and the rest are the health service's responsibility.
- Is it fair for health workers to be angry with those who default?
- How can health workers encourage people to complete their treatment?

Source: Smith I., *Tropical Doctor*, 1993, 23, 101-103.



Public-Private Partnerships

LEARNING OBJECTIVES

- To increase awareness of the advantages of co-operation between public and private healthcare providers when providing care and treatment for people with TB.
- To encourage collaborative projects, where public DOTS programmes are strong, to ensure TB treatment is available to everyone who has TB.

DISCUSSION QUESTIONS

In your community, where do people go for treatment of the signs or symptoms of TB? What do you think are some of the advantages and disadvantages of the different services? Do you currently collaborate with any of these service providers to improve TB programmes in your community? If so, how? Are there private practitioners in your community who provide TB treatment? Do you know some of them? Do you work with any of them already? If not, what do you think would be some of the advantages and disadvantages of working with them? In what ways do you think your health facility or programme could improve co-operation with private practitioners?

'Mahavir Hospital is acting as an interface between the government and the private providers, so I personally meet all the private providers and I have told them about the facility here and they have to refer their chest symptomatics to this facility for diagnosis and treatment of tuberculosis.' **Dr Akber Yazdani, MD in Charge, TB Programme, Mahavir Hospital, Hyderabad, India**

BACKGROUND INFORMATION

The World Health Organization recommends that every country should adopt the DOTS approach for treating TB. This means that co-operation across the health sector is essential, with all parties involved in healthcare, e.g. government health workers, private practitioners, community health workers, working together.

Areas with strong DOTS programmes may be ready to extend these programmes to include other health providers, such as private practitioners, to increase the availability of TB treatment. If attempts are made to set up such partnerships before public services are strong enough, the partnerships may fail and put future attempts to form partnerships at risk.

Successful partnerships will only be formed if private practitioners have confidence in public services.

In Hyderabad, India, as in most parts of the world, the private sector is the first point of contact for many people with TB. This is because private practitioners are:

- **accessible** – they practise close to where people live
- **convenient** – people do not have to travel long distances or take time off work to visit them
- **approachable** – they are supportive and treat people as individuals. In addition, there is often less stigma attached in going to a private practitioner, than to a government hospital.

In Hyderabad, over 80 per cent of people with TB first seek treatment from the private sector, so without the involvement of private practitioners the public health services would not be able to reach the majority of the population with TB.

This can cause problems for national TB control programmes. If private practitioners are not aware of correct drug treatments and diagnosis methods for TB then people may be misdiagnosed or their TB may be incorrectly treated – this leads to low cure rates, more people with infectious TB and, possibly, the development of MDR-TB (see page 10). Many people also spend time “shopping for a cure” among private practitioners, and while they are doing this they continue to spread TB to others.

Mahavir Trust Hospital, Hyderabad, co-ordinates a project that is part of India’s Revised National TB Programme, which is looking at partnership with private practitioners. The project covers an area with a population of half a million people and 302 private practitioners work within the area. As part of the partnership, private practitioners refer people with TB symptoms to the hospital, where people have their TB diagnosed and begin to receive treatment according to the DOTS strategy. Treatment for TB at the hospital is free.

After starting treatment, people can choose whether to continue to come to the hospital to have their treatment observed or whether to go to one of the neighbourhood clinics set up by the project. The clinics mean that people can receive treatment near their homes and the clinics are open 24 hours a day, so people can receive treatment before they go to work or at a time convenient to them.

Advantages of public-private partnerships for people with TB:

- TB is correctly diagnosed and treated.
- people receive information about TB and how it is cured.

Treatment is:

- **free**
- **accessible** – close to their homes or work
- **convenient** – there are no travel costs and no need to take time off work or away from family.

Advantages for private practitioners:

- their reputation is enhanced because people are cured
- people continue to be treated for all other health problems by the private practitioner (no loss of business)
- they can be trained as DOTS providers.

'Initially some doctors were concerned about losing patients to Mahavir as a result of their participation in the TB programme. But instead they found that they gained a better reputation for their collaboration in the project.' **Dr Akber Yazdani, MD in Charge, TB Programme, Mahavir Hospital, Hyderabad, India**

Advantages for health service:

- TB programme reaches a high proportion of population
- **cure rates are high** – in Hyderabad, the partnership has resulted in cure rates of 90 per cent.

'The private providers play an important role because patients go to the clinic which is very easily accessible to them. If we could bring about partnerships between various providers present in the community we could successfully implement DOTS as for the global targets of diagnosis and cure rates. I would say that if it is as successful as it has been in Hyderabad City this could be the way forward for a truly successful government and private partnership.' **Dr Akber Yazdani, MD in Charge, TB Programme, Mahavir Hospital, Hyderabad, India**

It is also essential that health workers and people with TB work together. Health workers can ensure that as many people as possible successfully complete treatment and are cured of TB, by providing information, education and encouragement to people taking TB treatment.



LEARNING ACTIVITY Building partnerships

AIMS to raise awareness of the variety of different groups or individuals providing TB treatment in any community.

To discuss the issues surrounding partnership with any of these groups in a collaborative TB programme.

To raise awareness of the advantages such collaboration might bring to the local community, health services and organisations involved.

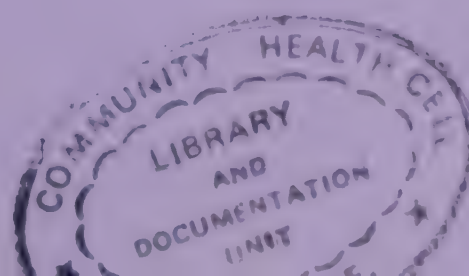
To identify ways to move towards partnership.

MATERIALS flip-chart, paper, pens.

TIME one to one and a half hours.

Ideally this discussion activity will include private health practitioners, as well as public sector health workers. If many people in your area use traditional health practitioners you may want to invite some of them to the discussion. If you already involve health workers from different sectors in your TB programme, you may wish to follow the video with a discussion on experiences of collaboration. If you currently do not have any collaborative programmes:

- 1** Divide participants into three groups. Give each group some pens and paper (alternatively they can draw on the ground). Ask them to draw a map showing where people go for TB treatment in their community. The map can be very rough: the idea is to think of all the places people go, e.g. public health facilities, private health facilities and traditional health practitioners.
- 2** Bring the groups back together, put the paper on the wall (or stand by the maps on the ground) and have someone from each group explain their map, and any issues that arose as they created it.
- 3** If the groups have indicated a variety of service providers, ask the group as a whole to comment about the services. (If they have only mapped out public health facilities ask them if these are really the only places people go for treatment). Draw up a flip chart for each group of service providers mentioned, e.g.:
 - private health practitioners
 - public-sector health workers



- community health workers
- traditional health practitioners.

Divide each flip chart into two columns, one for **advantages** and one for **disadvantages**, and write these down as they come up in the group.

- 1 Ask the group what they think would be the advantages of a TB programme that involved co-operation between all these service providers.
- 2 Ask participants what action they think would be needed in order to set up partnerships in the local community. This might include action to overcome barriers, such as educating private health practitioners about DOTS treatment and correct dosage, it might mean calling a meeting of all people interested in joining a collaborative programme, or even visits to all private practitioners to discuss possible collaboration. Make a list of these ideas for action.
- 3 What resources would each group need to contribute (e.g. laboratory facilities, diagnosis, counselling and education services). On a separate piece of flip chart, write which group could provide what – for example all the groups might be able to provide counselling and education services, but only one group might provide the laboratory facilities.
- 4 What would the first steps need to be towards developing formal collaboration? For instance, talking to the district health manager, calling a meeting of interested health workers, etc. Identify roles and responsibilities and dates when you would like action to be taken. Keep the first action points clear and simple. Remember, this is just the start! Give a date when you expect it to happen, identify who in the group will do it – or who will ask someone not in the group if it is more appropriate for a person outside the group to take the action – be clear that each person understands what they will do.
- 5 Arrange the next meeting when you can check progress on these action points.

Access to treatment

LEARNING OBJECTIVE

- To understand that there are many factors involved when people do not complete their course of TB treatment.
- To be aware that there may be issues in their community which could limit access to treatment.
- To consider ways in which they can improve access to TB treatment for all those in their community.
- To understand the importance of following up people who do not complete treatment to find out why they have not completed treatment.

DISCUSSION QUESTIONS

Do you think everyone with TB is accessing your services? If not, why? Do you think some groups in your community find it more difficult to access TB treatment? If so, which groups and why? In what ways do you try to adapt services to meet people's needs, for instance if they live far from a health centre or if they have AIDS?

'Visiting government clinics for treatment often requires access to transportation and time away from one's job, resulting in loss of wages and in some cases unemployment.' **Stop TB Initiative**

'This is an area where poor people live. They cannot afford costly treatment. When they have a cough or a cold they go from one doctor to another. Ultimately they come here.' **Dr Akber Yazdani, MD in Charge, TB Programme, Mahavir Hospital, Hyderabad, India**

'After the intensive phase of DOTS treatment Amir Al Haq continues DOTS at Dr Padma Reddy's neighbourhood clinic. Access to free treatment near his home and place of work allows him to continue to provide for his family while continuing treatment towards a cure.' **Stop TB Initiative**

BACKGROUND INFORMATION

Everyone with active TB needs access to treatment, but many people are prevented from getting treatment because of problems such as distance to health facility, cost of transport, household responsibilities and other work. Women often find it especially difficult to access treatment (see below).

'Hasif comes on DOTS days, in the morning, and inquires whether they have had their medicine or not. If any of the patients don't turn up he goes to their house and brings them here and explains to them why they should take their medicine.' **Dr Padma Reddy, DOTS provider, Revised National TB Programme, Hyderabad, India**

DOTS can help people to get appropriate treatment because it is community-based and people do not need to leave their homes or travel to health facilities to get treatment. DOTS treatment supervisors can travel to people in their homes or train people who live close to the person with active TB to directly observe treatment. This means that missed treatments can be followed-up effectively.

DOTS supervisors can help to identify and solve problems related to taking treatment and thus improve treatment completion rates.

By making treatment community-based, the costs of TB treatment for people with TB can be reduced. People do not have to take time off work (and thus lose pay) or pay to travel to a health facility. In addition, under the DOTS strategy drugs are free.

Including private practitioners in partnerships to provide DOTS treatment can extend accessibility to many more people: treatment can be provided nearer their homes, at times convenient to them, and going to neighbourhood clinics or private practitioners is often perceived to have less stigma attached than going to public hospital. In Hyderabad, the neighbourhood clinics provide access to treatment near where people live or work and the clinics are open 24 hours a day, so people can take their treatment before they go to work or at a time convenient to them.

'There are many instances, especially females, that don't go or they try to hide their symptoms, or maybe because they are busy in the household, they don't have access to the doctor in the neighbourhood.' **Dr Akber Yazdani, MD in Charge, TB Programme, Mahavir Hospital, Hyderabad, India**

Women's access to treatment

Women are often reluctant to seek treatment for TB, so TB programmes need to make special efforts to ensure that women seek and complete treatment. Over 900 million women in the world are infected with TB and it is the leading cause of death in young women in developing countries. At least 20 per cent of the six million women sick with TB at any given time die because they are undiagnosed or receive poor treatment.

'Patient access to neighbourhood clinics also minimises social stigma. In the past, women's access to effective ongoing TB treatment was limited in the face of social and economic constraints.' **Stop TB Initiative**

Particular problems that affect women include:

- poor education which limits access to information about symptoms and treatment of active disease
- the need to get permission or be accompanied by a male member of the family to visit a health centre
- lack of female health workers in cultures where female modesty is important
- stigma. In some communities stigma against women with TB means that they can be sent out of the family home or are vulnerable to abuse
- lack of time because of work and family demands.

However, at the Mahavir project there are almost as many women as men being treated for TB. Information and community education have reduced stigma associated with the disease and project leaders believe that going for treatment to neighbourhood clinics, rather than the hospital, has less social stigma attached and has encouraged more women to come for treatment.

Stigma and discrimination

LEARNING OBJECTIVES

- To understand how stigma and discrimination affect people individually and also how they affect health service delivery.
- To think of ways to challenge this discrimination when providing health services.

DISCUSSION QUESTIONS

Are some people with TB in your community afraid of being known to have TB? If so, why? Can you think of some of the things that might change in your life if you had TB? Would it be difficult to tell your family or friends if you were infected? Can you think of some ways in which people where you work or live discriminate against people with TB? If there was no stigma or discrimination, how do you think people with TB would behave? What do you think about people who have TB? What concerns do you have about caring for people with TB? How does the health facility where you work challenge stigma and discrimination against people with TB? Do you think some health workers discriminate against people with TB? If so, why?

BACKGROUND INFORMATION

Stigma and discrimination can be a major factor in people's willingness to seek treatment for TB. Stigma means a negative label that is put on a person or group of people. When people are stigmatised they are usually also discriminated against. In the case of TB, this means that they may not have access to medical treatment or if they do, they may be treated less sympathetically than other people with long-term chronic illnesses. For instance, they may be refused housing, lose their job or be sent home from school.

Stigma means that people may deny their illness or try to hide it from their community or family. People may be afraid of being isolated from their family and community, if others know they have TB. Fear of rejection can be an important reason for not seeking help from health services, especially not going for testing or counselling, and for not completing a course of treatment.

Understanding these attitudes and beliefs can help health workers to give more appropriate advice and to provide more relevant community health education.

Beliefs about TB and its causes are important influences on people's behaviour. People may:

- believe that TB cannot be cured and do not know that with proper treatment people are no longer infectious
- think TB is a disease sent from God, or caused by magic or witchcraft
- be unaware of TB and its symptoms, how it is spread and its seriousness
- think that TB only affects 'cursed' or 'bad' people
- consider people with TB to be unclean.

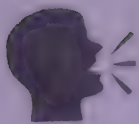
'The word spreads that TB care has been given and the girl will have a difficulty in marriage. Even when they're married even the husbands don't take kindly to their wives having the disease. Some they would like to leave their wives and divorce them.'

**Dr K.J.R. Murthy, Honorary Advisor, Revised National TB Programme,
Hyderabad, India**

It is useful to discuss local beliefs about TB. However, it is always important to emphasise positive attitudes and behaviour during such discussions (e.g. that TB can be cured). This is because focussing on negative beliefs and attitudes can reinforce negative behaviour.

It is also important that health workers do not reinforce or suggest negative attitudes towards people with TB during discussions and consultations. Although it is necessary to take precautions against being infected with TB, this can be done without stigmatising and isolating the person with TB. For example:

- keep consulting rooms and wards well-aired
- keep a reasonable distance from the person with TB, but do not be distant in your attitude (e.g. make eye contact, call them by their name, encourage them to talk, listen to what they say and appear interested.)
- politely ask the person to cover their mouth with their hand when coughing
- politely ask them to cough away from the health worker.



LEARNING ACTIVITY Understanding issues surrounding TB

AIM to encourage participants to think about the stigma attached to TB

MATERIALS a table and chairs, if participants choose to set the role play in a health facility.

TIME about one and a half hours.

Francis has TB and is concerned about what other people, including his wife, will think of him when he tells them he has TB. He is particularly concerned because many people think that people suffering from TB also have HIV.

In this activity, participants will play the role of either Francis, who has TB, or a health worker. Participants are asked to think about how that person would think, feel and behave when the results of a TB test are discussed. Representatives of each group will then act out a negative role play, in which information is communicated badly, and a positive role play, in which it is communicated well.

1 Divide participants into two groups. Ask one group to play the role of **Francis** and the other group to take the role of a **health worker**.

2a Ask the group representing **Francis**, who has TB, to discuss the concerns he may have about his diagnosis of TB. Issues to consider:

- Are you worried about where the health worker will give you your results? Are you worried someone else might overhear the health worker giving you your results?
- What questions do you want to ask the health worker about TB?
For example:
 - what is TB?
 - how did you get TB?
 - is there any treatment?
 - will you be cured?
 - how long will treatment last?
- Are you worried that your wife and family might have TB? Should you ask the health worker whether they need to come in for a check-up?
- Are you concerned that you might also be infected with HIV?
- Do you feel nervous about asking questions?

- What will make you feel more relaxed and able to ask for the information you want?
- Are you worried that members of your family and community might treat you differently if they know you have TB?
- Write the major concerns and worries that Francis might have on a flip chart.

2b Ask the group representing the **health worker** to imagine they are a health worker at a district hospital, who has held a consultation with Francis. His sputum smear results are positive and now you have to tell him that he has TB and also explain to him about TB and its treatment.

Discuss as a group how you will meet Francis and talk with him.

Think about:

- Where will you tell Francis his test results? e.g. at his home or at the local health facility?
- If it is the health facility, what issues do you need to think about? e.g. privacy.
- How will you greet Francis?
- How will you behave towards Francis now you know he has TB? Are you worried about treating him? If so, why?
- What information will you give Francis?
- Will you give Francis the opportunity to ask questions?
- Will you refer Francis for HIV counselling and testing? How will you discuss this?

Remember to think about how you communicate, e.g. do you call Francis by his name, do you make eye contact and listen to him without interrupting? Do you cross your legs and fold your arms? Do you talk at Francis without leaving any time for him to ask questions?

3 Each group chooses one or two members to take part in the following two role plays.

4 The two groups come together to perform the role plays:

The facilitator can suggest a structure to the role plays, e.g.

- Francis and the health worker meet to discuss the results of the TB test.
- The health worker greets Francis.

- The health worker tells Francis his results.
- What happens next?

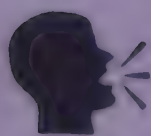
First participants act out a role play showing **negative attitudes**. Then have a short discussion (about 10 minutes) about the issues that arose. Then act out a role play showing **positive attitudes** and discuss the issues that arose.

Suggestions for a **negative role play**

- When greeting Francis, health worker does not shake his hand or make eye contact.
- Health worker tells Francis his results in front of other people.
- Health worker does not give Francis any information about TB or its treatment.
- Francis would like to ask many questions, but feels too nervous to ask.
- Health worker asks Francis if he has any questions, but at the same time she/he is leaving the room, so Francis thinks he should keep quiet.

Suggestions for a **positive role play**

- Health worker greets Francis in a friendly manner and ensures privacy.
- Health worker tells Francis he has TB, but there is treatment and he can be cured.
- Health worker gives Francis information about TB and its treatment, and makes sure Francis understands the information.
- Francis feels comfortable and asks some questions about TB, its treatment and causes.
- Health worker listens to Francis and answers his questions.
- Health worker gives Francis the opportunity to ask more questions.



LEARNING ACTIVITY Understanding stigma and beliefs about TB

AIM to help people identify beliefs about TB.

MATERIALS statements about TB written on small cards.

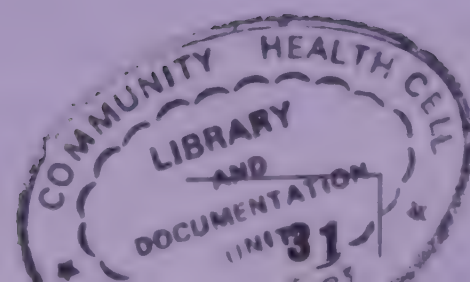
TIME about 45 minutes.

There are many beliefs about TB, the way in which it is spread and how it can affect a person.

- 1 Prepare a list of statements about TB that reflect common beliefs.
- 2 Read one of the statements to the group.
- 3 Ask each person to discuss the statement with another group member, deciding whether it is true or false. Then ask each pair to tell the group whether they think the statement is true or false.
- 4 Discuss the results as a group: ask people why they reached the decision they did and use their answers as a basis for discussion.
- 5 Repeat this procedure for all the statements.

Suggestions for statements:

- TB can be cured: true
- People with HIV and TB can be cured of TB: true
- TB only affects 'bad' or 'cursed' people: false
- People with TB are unclean: false
- Everyone with TB has HIV: false
- DOTS can cure HIV-related TB: true
- People taking TB treatment can stop their drugs once they feel better: false
- TB is only cured if the person takes the complete course of treatment: true



Counselling and education

LEARNING OBJECTIVES

- To understand the importance of counselling and community education in encouraging people to seek treatment for their TB and in ensuring that they complete their course of treatment.

DISCUSSION QUESTIONS

How do you work with your local community to inform them about TB? What counselling services do you offer to people with active TB? Why do you think educating people about TB and its treatment is important? What are the main subjects you would include when educating someone about TB and its treatment?

'TB is a chronic illness with a social stigma, so unless we educate the patient of the social awareness of the problem it cannot be controlled. The patient won't come for treatment unless we tell him about the disease, the duration of treatment, side-effects of treatment and the screening of family members involved. So health education is a really important factor in the treatment and successful management of TB.' **Rechu Chatterjee**, Secretary, Department of Family Welfare, Andhra Pradesh, India

BACKGROUND INFORMATION

Community education is an important factor in motivating people with TB to go for treatment. It can include education by health workers, peer education (education by members of the target group or community) and education in schools. Encouraging people to seek and complete TB treatment is essential for successful TB care and control.

Community education can include information about:

- symptoms of TB
- where to go for diagnosis and treatment
- treatment for TB and the fact that TB can be cured
- ways of preventing the spread of TB (cure is the best prevention)
- reducing stigma and discrimination.

Counselling for people with TB can include information about:

- treatment and its possible side-effects
- importance of continuing treatment until complete
- how to tell family members and encourage them to be screened for TB.

Education plays an important role in TB prevention and care programmes. Education programmes can also encourage people who think that they may have TB to go for counselling and testing, especially if there are effective care and support programmes in the

community. They can also encourage people to practise safer behaviour to avoid infecting themselves or others.

Community education can be especially effective as it can address people in a language, and using ideas, that they understand. Peer education can also be very effective. This is where members of a group educate other members of their group, for example, students in school. Peer education can be especially important in reaching marginalised groups, such as women, who may be hard to reach effectively with conventional education programmes.

People infected with, or affected by, TB can be especially effective educators. People with TB, who have completed treatment, can play a crucial role as mobilizers, educating and persuading people with TB to go for treatment. People cured of active TB enjoy trust and credibility in their communities and so they can convince sick people about the effectiveness of DOTS treatment. By talking about their experience, people whose TB has been cured can also help to reduce the stigma and discrimination associated with TB.

Education and counselling are important because they can:

- help people to understand that TB is very common and can be cured.
- inform people about where to go for diagnosis and treatment.
- encourage people to seek treatment for active TB and to complete treatment. People need to understand why it is important to continue treatment until it is complete and not stop when they feel better.
- help to reduce the number of people being infected with TB (by curing people with infectious TB).
- help to reduce stigma and discrimination associated with TB.

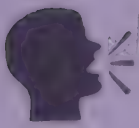
It is important to adapt your information to suit people's level of knowledge and education and, probably most importantly, to make sure it addresses all their needs related to TB.

It is important to think of appropriate ways to communicate with communities (e.g. by street theatre, posters, community meetings), to think about the information people really need and how to present this information to them, so that they understand it. (For further information on community education see *Shanta: model community mobilizer* video.)

It is important that people delivering community education and prevention programmes are aware of issues of stigma and discrimination around TB and have undergone some kind of awareness-raising themselves (see learning activities, page 26) so that these programmes do not further stigmatise people with TB.

Training for health and community workers

Health workers and community workers need to know the basic characteristics of TB, how to prevent transmission, what treatment is available locally and where. They also need to know how to protect themselves from infection (see Annex 4).



LEARNING ACTIVITY Counselling for people with TB

AIM to help strengthen the counselling that health workers give people with TB or suspected TB.

MATERIALS a large room, a flip chart and pen.

TIME one to one and a half hours.

This is a role play activity.

- 1 Read the following description to the group. [You might like to give the characters local names.]:

The situation is a rural village. Rose, a community health worker, has been trained at the local health facility as a DOTS provider. One of the men in the village, John, goes to see Rose because he has had a cough for more than a month and has started to have night fevers. Rose suspects that he may have TB and suggests that he have a sputum test. Rose gives John some pre-test counselling. John agrees to the test and Rose takes a sample of his sputum for diagnosis at the health facility. The test shows that John has active TB and so Rose goes to tell John.

- 2 Ask people to form pairs. Ask one person in each pair to play the role of John and the other person to play the role of Rose.

The people playing Rose might want to think of questions such as:

- what might help John feel more comfortable?
- where should they meet?
- what things should she listen for and what signs can she look for to see how he is feeling?
- what information might he need?

The people playing John might want to think of questions such as:

- what would help him ask the questions he wants to ask?
- what might he be particularly worried about?
- what information does he need?
- what can he do if Rose does not give him the information he needs?
- what about if he forgets what Rose tells him?
- should his wife be there?

- 3 Ask each pair to present their role plays to the whole group.

4 Discuss the issues that arose concerning:

- Rose's role
- John's role.

The facilitator or another person in the group can write some of the main issues that came up during this activity on a flip chart and the group can discuss these further to see what lessons they have learned from the role play and how they might use what they have learned to improve their counselling for people with active TB or suspected TB.

5 If there is time, you may want to ask the group to think about all three stages of counselling:

- before the test
- after the test
- on completion of treatment, or, if John does not complete treatment, follow-up on failed treatment.

PART 3 Resources

Printed materials

Current issues in TB Control

Healthlink Worldwide (formerly AHRTAG), 1999

Health Action (issue 24)

Available free from: Healthlink Worldwide, Cityside, 40 Adler Street, London E1 1EE, UK

E-mail: info@healthlink.org.uk

Clinical tuberculosis

A practical, comprehensive guide to the diagnosis of all forms of TB in both adults and children.

Available, price £3.50, in English, French, Spanish and Portuguese from: Teaching-aids At Low Cost (TALC), PO Box 49, St Albans, Herts AL1 5TX, UK

E-mail: talcuk@btinternet.com

Under the Mupundu tree: Strategies for Hope Series no. 14

Petri Blinkhoff, Esaya Bukanga, Brigitte Syamalevwe and Glen Williams

Volunteers in home care for people with HIV/AIDS and TB in Zambia's Copperbelt.

Available, free to organisations based in sub-Saharan Africa, £3.50 for others, from: TALC (see address above)

Managing tuberculosis at district level

A series of manuals giving guidance on the management of TB treatment

Available from: WHO, 20 Avenue Appia, CH-1211 Geneva 27, Switzerland

Ten steps to successful DOTS

Guidelines for introducing and expanding DOTS in a district

National Tuberculosis Programme, Ministry of Health, His Majesty's Government of Nepal.

Available from: National Tuberculosis Centre, Department of Health Service, Ministry of Health, His Majesty's Government of Nepal Fax: +977 1 630061

Tuberculosis case management desk guide

The Nuffield Institute for Health (UK) and the Association for Social Development (Pakistan), in partnership with the National Tuberculosis Programme in Pakistan, have drafted a set of TB materials including a case management desk guide, DOTS implementation guidelines and training packages for district level health managers, doctors, paramedics, laboratory technicians and community health workers.

Draft materials are being piloted in Swaziland (by the Good Shepherd Hospital) and in Pakistan. First versions will be available (in English and Urdu) in three to six months. A generic version of the guidelines is also planned.

For information contact: John Walley, Director TB Programme, Nuffield Institute for Health, TB Programme, 71-75 Clarendon Road, Leeds, LS2 9PL, UK

Fax: +44 113 2336997, Tel: +44 113 2336963, E-mail: j.d.walley@leeds.ac.uk

Electronic materials

The following web-sites have information on tuberculosis:

www.stoptb.org

www.who.int/health-topics/tb.htm

Audio-visual materials

Other videos in this series:

TB/HIV: the dual epidemic

This video looks at how DOTS is working as an effective TB cure among those with TB and HIV. It also points to the need for stronger links and collaboration between TB and HIV/AIDS prevention and control efforts. Aimed at a global audience.

DOTS workers: Frontline heroes to Stop TB

This video outlines the five key pillars of the DOTS strategy and profiles DOTS workers, people with TB and community volunteers in India, Nepal, Egypt and Syria. Aimed at audiences in the above mentioned countries.

Shanta: model community mobilizer

This video profiles the work of Shanta Rae, a health educator in Orissa, India, and focusses on community mobilisation and education as the keys to the success of the DOTS strategy. Aimed at audiences in India.

TB and sustainable development

This video examines the impact of TB on social and economic development. Aimed at a global audience.

All these videos are available from: Stop TB Initiative, World Health Organization, 20 Avenue Appia, CH-1211 Geneva 27, Switzerland

Tuberculosis Case Management CD-ROM

This CD-ROM can be used to train health workers in the latest TB diagnosis and treatment, using the DOTS approach.

Available, free to those in developing countries, \$42.50 to others, from: Quality Assurance Project Center for Human Services, 7200 Wisconsin Avenue, Suite 600, Bethesda, MD 20814-4811, US.

www.qaproject.org

PART 4 Annexes

Annex 1 Session plan

Below is an example of a plan for a three-hour training session related to this discussion guide.

1. Introduction (15 minutes)
 - Facilitator introduces him or herself
 - Facilitator shares plan of session, its aims and objectives
 - Participants introduce themselves and share their expectations of the session.
2. Facilitator introduces the subject of the session (5 minutes).
3. Facilitator shows video (15 minutes).
4. Discuss aspect of video, e.g. stigma and discrimination (1 hour).
 - Facilitator can use discussion questions and background information to facilitate discussion and provide information.
5. Break (10 minutes).
6. Learning activity (1 hour).
7. Discussion of any follow-up and thank you to participants (15 minutes).

Annex 2 Participant questionnaire

Below are some suggested questions to ask participants, so you have some idea of their background and current knowledge. You can add extra questions, according to your needs.

1. Where do you live?
2. What work do you do?
3. Do you live or work with people who have TB?
4. Do you think you know:
 - a lot about TB?
 - a little about TB?
 - nothing about TB?
5. Do you think you know:
 - a lot about DOTS?
 - a little about DOTS?
 - nothing about DOTS?
6. Do you know what the DOTS treatment strategy is?
7. Do you use DOTS when treating people with TB?

Annex 3 Sample treatment regimen for TB

The following regimen is suitable for:

- people with a new case of sputum smear positive pulmonary TB
- seriously ill people with severe forms of sputum smear negative pulmonary TB with extensive parenchymal involvement
- seriously ill people with extra-pulmonary TB.

People who have been treated for TB before (treatment failures or relapses), people with pulmonary TB who are smear negative, people with extra-pulmonary TB and children, will need different treatment regimens (see Managing Tuberculosis at District Level, Resources page 36).

Short-course Regimen Adults (>14 years old)

INITIAL INTENSIVE PHASE					CONTINUATION PHASE
Daily during months 1 and 2					Three times a week during months 3, 4, 5, and 6**
Pre-treatment weight	HR	Z	S or E		HR
	H 100mg R 150mg (combined tablet)	Z 500mg tablet	S injection	E 400mg tablet	H 100mg R 150mg (combined tablet) + H 300mg tablet
less than 33kg	2	2	500mg	2	2 HR+ 1 H
33-50kg	3	3	750mg	2	3 HR + 1 H
51kg	4	4	1g*	3	4 HR + 1 H

HR = isoniazid + rifampicin

Z = pyrazinamide

S = streptomycin

E = ethambutol

H = isoniazid

NOTE* One gram = one vial

750mg of streptomycin should be given to a person over age 50

NOTE** For the daily dosage of HR, use the same dosage and number of tablets as in the intensive phase

Source: *Managing tuberculosis at district level: a training course*. Tuberculosis Programme, WHO.

Annex 4 Guidelines to reduce transmission of TB in health facilities

Prevention of transmission in health facilities is important. Health workers need to be educated about TB and trained in infection control. Good working practices based on the following guidelines can reduce the risk of transmission.

Let in light and air

- Proper ventilation is one of the most effective measures to reduce TB transmission because it disperses TB germs in the air.
- Ultraviolet (UV) light kills TB germs. Sun is a cheap source of UV light. Special UV lights are not recommended because they have not been shown to be effective. They are also expensive, require careful maintenance and can be harmful if not installed properly.
- Waiting areas, out-patient clinics and wards should be well-ventilated or aired several times a day, and have large uncurtained windows, which let the sunlight in.
- Fans are useful in moving air from the wards to the outside.
- In colder climates, where the windows need to be closed, air flow from TB wards should not be directed to other parts of the hospital, especially areas where there are young children and infants.

Keep people with active TB separate

- Remember that adults with pulmonary TB, who are sputum smear positive, are the most infectious.
- Keep potentially infectious people separate from areas where there are young children and babies, such as maternal and child health clinics.
- People with confirmed smear positive pulmonary TB who have to be hospitalised should be in separate wards away from people without TB and especially away from paediatric and maternity wards. This is especially important during the first phase of treatment, until they are no longer infectious.
- Infectious adults need to understand that they can transmit TB germs to staff, other people in the hospital and to visitors. Encourage them to cover their mouth and nose when coughing and sneezing, if possible with a clean handkerchief or cloth. Surgical masks are not very effective, are expensive and can increase stigmatisation of people with TB.

Safe handling of sputum

- Sputum specimen should be collected in a place away from general waiting rooms or hospital wards, in a special receptacle (spittoon) with a lid.
- Laboratories processing sputum specimens should follow guidelines to prevent transmission to laboratory workers.
- Disposable spittoons must be incinerated after use. Metal or plastic spittoons should be disinfected and washed. Anyone handling spittoons should wash their hands afterwards.

Adapted from: *Control of tuberculosis transmission in health care settings*. Joint statement of the IUATLD and WHO TB Programme.

Annex 5 DOTS: a short course in TB control

DOTS stands for Directly Observed Treatment, Short course. It is the global strategy for TB treatment recommended by the World Health Organization.

People with TB can be cured with DOTS wherever they live. WHO has set a target cure rate of 85 per cent. In countries with high numbers of people with HIV, cure rates are up to 20 per cent lower because of the correspondingly higher death rate (mainly due to causes other than TB).

DOTS consists of five main components:

- detection of new infectious cases through microscopic examination of sputum
- a reliable drugs supply for an eight month course of treatment
- direct observation of people taking their medication, at least for the first two months of treatment
- a reliable system for monitoring progress of people taking treatment
- political and financial commitment by government.

The DOTS strategy of TB control generally does not require the person to stay in hospital.

There are six basic TB drugs: isoniazid, rifampicin, pyrazinamide, streptomycin, ethambutol and thiacetazone. The formulations and combinations of these drugs vary from country to country. (WHO recommends that people with HIV should **not** be treated with thiacetazone.)

The cost of a DOTS course of treatment in sub-Saharan Africa ranges between US\$15 and US\$30.

The World Bank ranks TB control through DOTS among the top ten public health interventions in terms of cost-effectiveness.

By 1998, out of 212 countries worldwide, only 119 had adopted DOTS.

Worldwide, only about 21 per cent of all people with TB were being treated under the DOTS strategy in 1998.

Adapted from: *Under the Mupundu tree* (see Resources page 36).

